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OIML Member State Czech Republic	**OIML Certificate No.** R49/2013-A-CZ1-26.01

OIML CERTIFICATE ISSUED UNDER SCHEME A

OIML Issuing Authority

Name: Czech Metrology Institute
Address: Okružní 31, 638 00 Brno, Czech Republic

Person responsible: Jan Kalandra

Applicant

Name: SHANGHAI BEIFEI AUTOMATION INSTRUMENT CO.,LTD.
Address: Rm. 11A, No. 2157, South Pudong Road, Pudong New District, Shanghai, China

Manufacturer

Name: SHANGHAI BEIFEI AUTOMATION INSTRUMENT CO.,LTD.
Address: Rm. 11A, No. 2157, South Pudong Road, Pudong New District, Shanghai, China

Identification of the certified type *(the detailed characteristics will be defined in the additional pages)*

water meter - electromagnetic
BFG070

Designation of the module *(if applicable)*

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This OIML Certificate attests the conformity of the above identified type (represented by the sample(s) identified in the OIML type evaluation report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

OIML R 49 Edition (year): 2013

For accuracy class (if applicable): 2

Český metrologický institut
-3-

This OIML Certificate relates only to metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML Recommendation identified above.

This OIML Certificate does not bestow any form of legal international approval.

The conformity was established by the results of tests and examinations provided in the associated OIML type evaluation report:
No. 0511-ER-V156-24 dated 24 March 2026 that includes 84 pages including annex 1-4.

- OIML test report No. 6015-PT-P0002-26 that includes 47 pages including annex 1
- Software validation test report No. 6011-PT-SW006-26 that includes 3 pages.
- EMC OIML test report No. 8551-PT-E0133-22 that includes 8 pages including annex 1

The technical documentation relating to the identified type is contained in documentation file:

0511-UL-V156-24

OIML Certificate History

Revision No.	Date	Description of the modification
-	5 May 2026	Issuing certificate

The OIML Issuing Authority
Ing. František Staněk, PhD.
Deputy Director of Certification Body

Date: 5 May 2026

Český metrologický institut
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Important note: Apart from the mention of the Certificate's reference number and the name of the OIML Member State in which the Certificate is issued, partial quotation of the Certificate and of the associated OIML type evaluation report(s) is not permitted, although either may be reproduced in full.

Measuring system description

The water meters type BFG070 are designed to measure, memorise and display the volume at metering conditions of water passing through the measurement transducer.
The water meters type BFG070 are the electromagnetic water meters.
The water meters type BFG070 consist of flow sensor and an electronic calculating/indicating device. The flow sensor measures based on an induction principle and hard rubber lining, with straight inlet (5 times the diameter) and outlet (3 times the diameter) length, without flow conditioner. The meter is designed to measure reverse flow. The water meter type BFG070 has to be equipped with a plastic cover over the electronics. This cover must be provided with a conductive coating in the inside, the lid is equipped with a device that ensures automatically closing of the lid. The LCD display is protected by a conductive metallic foil. The all components of water meter type BFG070 have to be conductively connected.
The water meters type BFG070 are equipped with the electronic indicating device. The display shows the delivered volumes in cubic meters (positive, negative, total) per hour. The user resolution mode is used during normal operation. The water meter displays in the normal resolution mode up to 00000000.001 m^3/h and 00000000.001 m^3 on the digital display. The water meter displays the volume resolution of 0.001 L on the digital display in the high resolution mode which would be used during the calibration process. This mode is set up by factory tool (software has to be attached) where the passwords (user, service and factory) secure access to the metrological parameters. Version of software is shown after reset system in last row on the display. Checksum can be displayed by entering menu Info – FW Checksum. Software identification is also integrity of software.
The water meters type BFG070 shall be installed to operate in positions with the flow axis in the horizontal and vertical (from bottom to top and from top to bottom) plane.

Marking and inscriptions

The water meters types type BFG070- shall be clearly and indelibly marked with the following information:

- Unit of measurement (m^3)
- Numerical value Q_3 in m^3/h (Q_3 ×.×) and the ratio Q_3 / Q
- OIML certificate of conformity number
- Name of trademark of the manufacturer
- Year of manufacture, two last digits of the year of manufacture, or the month and year of manufacture and serial number (as near as possible to the indicating device)
- Direction of flow, by means of an arrow (shown on both sides of the body or on one side only provided the direction of flow arrow is easily visible under all circumstances)
- Maximum admissible pressure (MAP ××)
- The temperature class (T××)
- The pressure loss class (Δp ××)
- The installation sensitivity class (U× D×)

There are additional data required for water meter with the electronic indicating device:

- Environmental classification (B)
- Electromagnetic environmental class (E2)

These markings shall comply with the requirements of OIML R 49 and shall be visible without dismantling the water meter after the instrument has been placed on the market or put into use.

The environmental classification and electromagnetic environmental class may be given on a separate datasheet, unambiguously related to the meter by a unique identification, and not on the meter itself.

Characteristics

Manufacturer:	SHANGHAI BEIFEI AUTOMATION INSTRUMENT CO.,LTD.
Model name:	BFG070
Nominal diameter:	*40*
Type details:	
Q_1 [m^3/h]:	0.160
Q_2 [m^3/h]:	0.256
Q_3 [m3/h]:	40
Q_4 [m^3/h]:	50
Q_3/Q_1:	250
Q_2/Q_1:	1.6
Q_4/Q_3:	1.25
Measuring principle:	electromagnetic
Accuracy class:	2
Temperature class:	T50
Water pressure class:	MAP16
Pressure loss class:	*Δp25*
Reverse flow:	*designed to measure*
Environmental class:	*B, O*
Electromagnetic environment: [1]	E2
Temperature range ambient:	-25 °C / 55 °C
Maximum admissible temperature [°C]:	50
Maximum admissible pressure [MPa]:	1.6
Orientation limitation:	H (horizontal position with the indicating device positioned at the top) V (vertical position flow from bottom to top with the indicating device positioned at the side; vertical position flow from top to bottom with the indicating device positioned at the side)
Indicating range – testing mode/user mode [m^3]:	*99 999*
Resolution of the indicating device testing mode/user mode [m^3]:	*0.000001*
Resolution of the device for rapid testing [pulse/dm^3]:	*72*
Resolution of the indicating device for rapid testing [m^3]:	*0.000001*
EUT testing requirements (OIML R 49-2:2013, 8.1.8):	
Category:	Electromagnetic water meters
Case:	B
Installation details:	
Connection type (screw thread):	flanges
Minimum straight length of inlet pipe [mm]:	5
Minimum straight length of outlet pipe [mm]:	3

Flow profile sensitivity class:	*U5D3*
Flow conditioner (details if required):	No
Mounting:	-
Orientation:	H; V
Other relevant information:	-
Length [mm]:	*200*
Reed switch power supply (U_{max} / I_{max}):	-
Reed switch K-factor (impulse / L):	-
Installation details (electrical):	
Wiring instructions:	-
Mounting arrangement:	-
Orientation limitations:	-
Power supply:	
Type (battery, mains AC, mains DC):	Battery
U_{max} (V):	3.6
U_{min} (V):	2.0
Frequency:	-
Minimum battery life time [years]:	5 years
Software version (of legally relevant SW):	-
CRC checksum (of legally relevant SW):	44C5CA23
Ancillary devices (not certified):	
Reed sensor power supply (U_{max} / I_{max}):	-
Type	-
Power supply (U_{max} / I_{max})[2]:	-
K-factor [pulse/Litres]:	-
Reed sensor power supply (U_{max} / I_{max}):	-
Further information specified by the manufacture (not certified)	
-	-

[1] The ratio Q_3 / Q_1 shall be chosen according to paragraph 4.1.4 of OIML R 49-1:2013

Securing components and verification marks

To prevent tampering with the water meter type BFG070, one of the screw connecting the water meter body and counter case is connected with the butts on the electronic output of water meter by a wire with a seal.